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SECOR  
INTERNATIONAL  
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916-861-0400 TEL  
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November 2, 2005

Mr. Mark Verhey  
Humboldt County Department of Public Health  
100 H Street  
Eureka, California 95501

RE: **Quarterly Status and Remediation Summary Report – Third Quarter 2005**  
SECOR Project No.: 77CP.60009.01.1106

Dear Mr. Verhey:

On behalf of ConocoPhillips, SECOR International Incorporated is forwarding the quarterly summary report for the following location:

<u>Service Station</u>	<u>Location</u>
Former 76 Service Station No. 01106 LOP # 12698	1693 Central Avenue, McKinleyville, California

If you have questions or comments regarding this quarterly summary report, please do not hesitate to contact me at (916) 861-0400.

Sincerely,  
**SECOR International Incorporated**

A handwritten signature in black ink, appearing to read "Thomas M. Potter".

Thomas M. Potter  
Project Scientist

Attachment: SECOR's *Quarterly Status and Remediation Summary Report – Third Quarter 2005*

cc: Mr. Thomas Kosel, ConocoPhillips

Mr. Mark Verhey  
November 2, 2005  
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**QUARTERLY STATUS AND REMEDIATION REPORT  
THIRD QUARTER 2005**

Former 76 Station No. 01106  
LOP #12698  
1693 Central Avenue  
McKinleyville, California

City/County ID #: McKinleyville

County: Humboldt

**SITE DESCRIPTION**

The subject site is located on the corner of Central Avenue and Sutter Road in McKinleyville, California. The site was previously an operating retail service station. Currently, a retail drive up espresso kiosk is located at the site.

**PREVIOUS ASSESSMENT**

In 1999, Tosco Marketing Company (now ConocoPhillips) removed three 10,000-gallon gasoline underground storage tanks (USTs) and associated piping and dispensers. Results of laboratory analyses of samples collected during the work indicated that hydrocarbons were present in soil and groundwater beneath the site.

In February 2000, at the request of Tosco, Environmental Resolutions Inc. (ERI) performed a soil and groundwater investigation including the installation of four on-site groundwater monitoring wells (MW-1 through MW-4) and one on-site boring. Results of laboratory analyses of soil samples collected during the investigation indicated that hydrocarbon concentrations in soil were not detected and therefore were delineated. The results of laboratory analyses of groundwater samples indicated that dissolved hydrocarbons were present in groundwater and were not delineated.

In October 2000, ERI installed one on-site and four off-site groundwater monitoring wells (MW-5 through MW-9).

In February 2003, ERI submitted a corrective Action Plan (CAP) recommending the installation of an ozone microsparge system.

In May 2003, sparge wells AS-1 through AS-7 were installed at the site.

In October 2003, a remedial system design utilizing ozone microsparging was prepared.

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In January 2004, an ozone injection system was installed at the site by Miller Brooks Environmental, Inc., with SECOR performing operations and maintenance activities. The ozone injection system consists of a panel mounted KVA C-Sparge™ System that produces 4 grams per hour (0.009 pounds per hour) of ozone. The system injects to seven ozone sparge wells (AS-1 through AS-7).

## SENSITIVE RECEPTORS

In October 2000, ERI performed an underground utility survey, and performed a door-to-door groundwater receptor survey within a 1,100-foot radius of the site. The door-to-door groundwater receptor survey revealed seven potential groundwater receptors, all of which are water supply wells. Four of these wells were reported as inactive, one well was reported as active, and the status of the remaining two wells is unknown. Detailed well information such as well use, total depth, and perforated screen interval was not available. The closest active well to the site located by ERI is approximately 1,100 feet southwest (crossgradient) of the site. The door-to-door groundwater receptor survey did not reveal any basements with groundwater sumps, surface water bodies, or other potential groundwater receptors.

## MONITORING AND SAMPLING

The site has been monitored and sampled since third quarter 2000. Between third quarter 2000 and the present, monitoring and sampling has been conducted quarterly. Currently, seven wells (MW-1 through MW-3 and MW-5 through MW-7 and MW-9) are sampled quarterly. MW-4 and MW-8 are sampled semiannually. Samples are analyzed for total petroleum hydrocarbons as gasoline (TPHg), and benzene, toluene, ethylbenzene, and total xylenes (BTEX). Additionally, samples are analyzed for nitrate, sulfate, carbon dioxide, and ferrous iron, methane, alkalinity, manganese, biochemical oxygen demand, and chemical oxygen demand. Results are discussed below and are summarized in TRC's *Quarterly Monitoring Report, July through September 2005* dated October 11, 2005, which is included in Attachment 1.

## DISCUSSION

During the third quarter 2005, depth to groundwater ranged between 6.92 and 12.49 feet bgs, which was in the range of historical levels. The current direction of groundwater flow is toward the northwest at a gradient of 0.02 ft/ft.

Evaluation of dissolved concentrations through the third quarter 2005 indicates that the highest concentrations of residual petroleum hydrocarbons and MtBE continue to be detected in on-site well MW-2. During third quarter 2005, TPHg and MtBE were detected at maximum concentrations of 6,000 µg/L and 1,200 µg/L, respectively, in the groundwater sample collected from MW-2. These concentrations are significantly higher than second quarter. This is most likely due to the ozone generation system not running for most of the

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quarter due to the 16-amp breaker and PG&E removing power. Concentrations of TPHg and MtBE have fluctuated within historical levels over the short term but have generally decreased over time. The dissolved plume remains defined by the existing monitoring well network.

The existing ozone sparge (OS) well network appears to be successfully remediating hydrocarbons dissolved in the groundwater downgradient of the former USTs. Remaining TPHg, benzene, and MtBE continue to be present in groundwater at MW-2 at concentrations greater than water quality requirements. SECOR will continue to operate and evaluate the effectiveness of the OS system during the fourth quarter 2005.

## CHARACTERIZATION STATUS

Contamination in soil and groundwater has been adequately delineated.

## REMEDIAL PERFORMANCE SUMMARY

### Ozone Injection Operation

The ozone injection system consists of a wall mounted KVA C-Sparge™ System, model 5020, that produces up to 4 grams per hour (0.009 pounds per hour) of ozone. The system is programmed to inject to each well for ten minutes, cycling eighteen times per day resulting in 87.5 percent operation. During the current quarter (June 17, 2005 to September 9, 2005), the ozone injection system was operational for 15 percent of the programmed runtime, resulting in 264 hours of operation and approximately 2.4 pounds of ozone injection. On July 15 and August 11, 2005, the system was found to be non-operational due to a tripped 16 amp breaker. The breaker was reset and the system was restarted on the July 15 visit. During the August 11 visit, the 16 amp breaker was replaced with a 15 amp time delay fuse. A new compressor was also installed and the primary power wires were replaced. The system was found to be operational upon the next site visit on August 18, 2005. On September 9, 2005, it was discovered that the business that supplied the remediation system with its power was closed for business and PG&E has shut the power off. ConocoPhillips is in the process of getting dedicated power for the remedial system from PG&E. Cumulatively, the ozone injection system has operated for 5,467 hours and has injected a total of approximately 49.2 pounds of ozone into the subsurface. Table 1 presents the operating data for the ozone injection system and includes operating hours and pressure readings. Field data sheets are included as Attachment 2.

### Monthly Groundwater Sampling

Previously, monthly groundwater samples were collected from monitoring wells MW-2 and MW-4 and analyzed for TPHg, BTEX, and MtBE. Monthly sampling was discontinued at the request of ConocoPhillips after the July sampling event. Results of the monthly groundwater sampling events are summarized in Table 2. In addition to the monthly groundwater samples collected for laboratory analysis, oxidation reduction potential (ORP)

# **S E C O R**

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and dissolved oxygen (DO) measurements were also collected monthly. The ORP and DO data are also included in Table 2. A site plan is included as Figure 1 and concentration versus time graphs for dissolved TPHg, benzene, and MtBE in monitoring wells MW-2 and MW-4 are provided as Figure 2 and Figure 3, respectively. Certified laboratory analytical reports and chain-of-custody documentation for the groundwater monitoring events conducted in during the current quarter are provided in Attachment 3.

## **WASTE DISPOSAL**

The volume of purged groundwater generated and disposed of during the quarterly groundwater monitoring event is documented in TRC's *Quarterly Monitoring Report, July through September 2005* dated October 11, 2005 (Attachment 1).

## **RECENT SUBMITTALS/CORRESPONDENCE**

Submitted – *Quarterly Status and Remediation Summary Report – Second Quarter 2005*, dated June 3, 2005.

## **THIS QUARTER ACTIVITIES (Third Quarter 2005)**

1. TRC performed quarterly groundwater monitoring and sampling.
2. SECOR performed operation and maintenance of the ozone system.
3. SECOR prepared and submitted quarterly summary report and quarterly remedial performance summary.

## **NEXT QUARTER ACTIVITIES (Fourth Quarter 2005)**

1. TRC to conduct quarterly groundwater monitoring and sampling.
2. SECOR to continue operation and maintenance of the ozone system.
3. SECOR to prepare and submit quarterly summary report and quarterly remedial performance summary.
4. SECOR to restore power for the ozone generations system.

## **LIMITATIONS**

This report presents our understanding of existing conditions at the subject site. The conclusions contained herein are based on the analytical results, and professional judgment in accordance with current standards of professional practice; no other warranty is expressed or implied. SECOR assumes no responsibility for exploratory borings or data reported by other consultants or contractors.

# SECOR

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Mr. Mark Verhey  
November 2, 2005  
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Sincerely,  
**SECOR International Incorporated**



Brian Carey, P.G.  
Associate Geologist

Attachments:

Figure 1 – Site Plan

Figure 2 – MW-2 TPHg, Benzene and MtBE Groundwater Concentrations

Figure 3 – MW-4 TPHg, Benzene and MtBE Groundwater Concentrations

Table 1 – Ozone Injection System Operating Data

Table 2 – Ozone Injection System Groundwater Monitoring Data

Attachment 1 – TRC's *Quarterly Monitoring Report – July through September 2005*, dated October 11, 2005

Attachment 2 – Remediation System Field Data Sheets

Attachment 3 – Certified Laboratory Analytical Reports and Chain-of-Custody Documentation

**FIGURES**

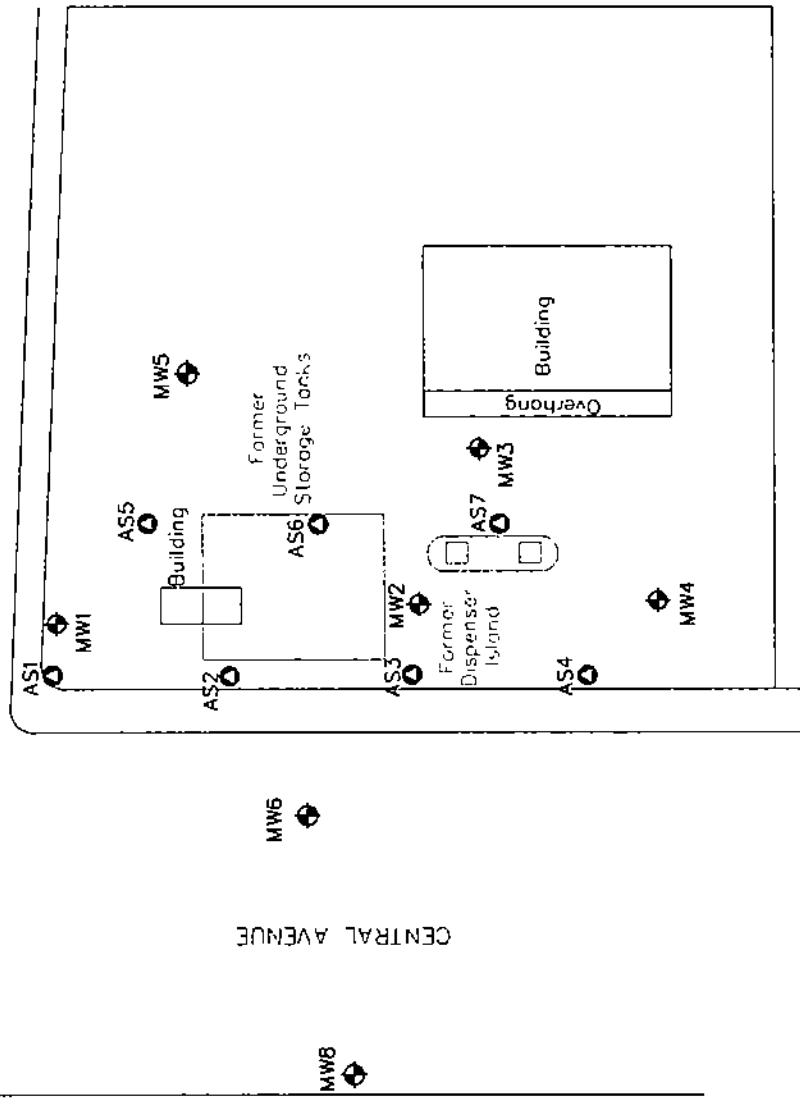
LEGEND:

MW1 GROUNDWATER MONITORING WELL

AS5 AIR SPARGE WELL

MW7 SUTTER ROAD  
MW1

MW9



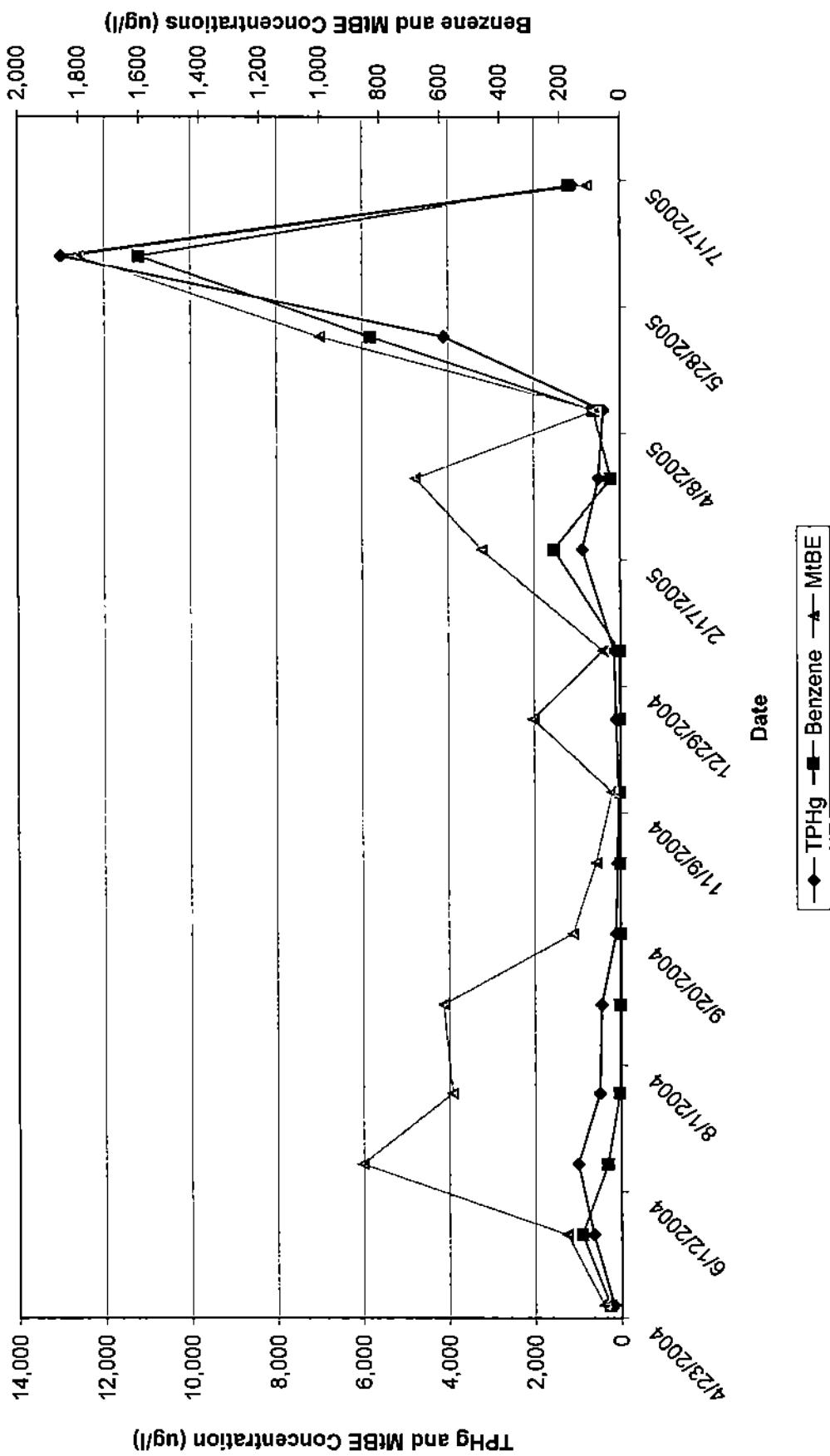
0 60 120  
FEET  
APPROXIMATE SCALE

FIGURE 1  
SITE PLAN

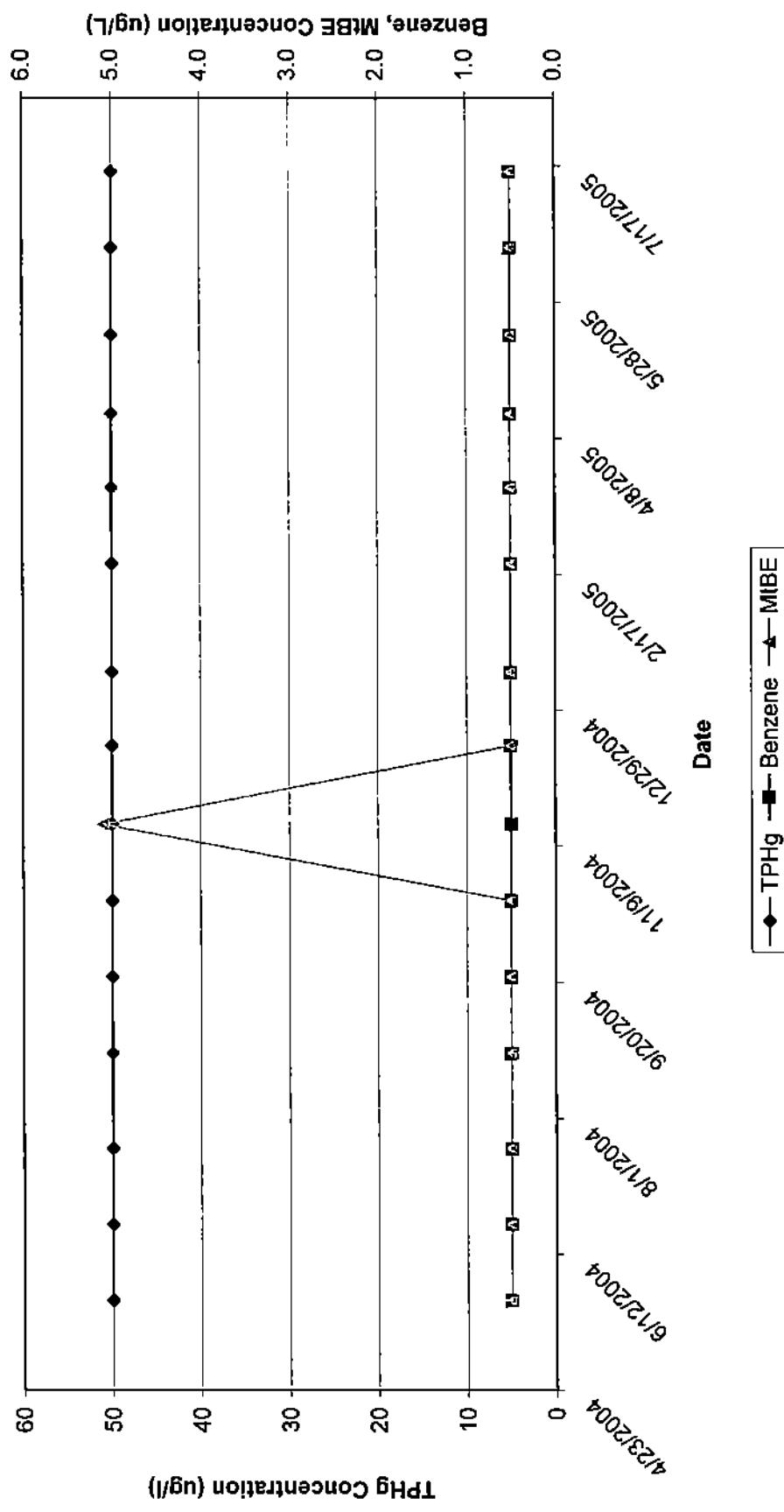
DRAWN BY:	PREPARED BY:	PREPARED FOR:
DWR	AG	FORMER 76
CHECKED:	RB	(CIRCLE K) STORE 01106
APPROVED:		
DATE:	7/19/04	
JOB NO.:	77CP8004.01.1106	1693 CENTRAL AVENUE
CAD FILE:	MAACAD	MCKINLEYVILLE, CALIFORNIA

REFERENCE: THIS FIGURE IS BASED ON A MAP  
PROVIDED BY ERIN INC.

**Figure 2**  
**MW-2 TPHg, Benzene, and MtBE Groundwater Concentrations**  
Former Circle K Store No. 01106  
1693 Central Avenue, McKinleyville, California



**Figure 3**  
**MW-4 TPHg, Benzene, and MtBE Groundwater Concentrations**  
Former Circle K Store No. 01106  
1693 Central Avenue, McKinleyville, California



**TABLES**

Table 1  
Ozone Injection System Operating Data  
Former Circle K Store No. 01108  
1693 Central Avenue, McLeaverty, California

Date	Notes	OZONE SPARGE SYSTEM		Pump Online Factor	Cumulative Online Factor	Pressure (psi)							
		Sodium Status (On/Off)	Arrival Departure										
1/17/2004		Off	On	0	NA	NA	NA	NA	NA	NA	NA	NA	
1/12/2004		On	On	0.7	NA	NA	NA	NA	NA	NA	NA	NA	
1/23/2004		On	On	0.7	0.78	0.78	NA	NA	NA	NA	NA	NA	
1/30/2004		On	On	0.7	0.93	0.93	NA	NA	NA	NA	NA	NA	
2/4/2004		On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
2/27/2004	D	On	On	0.7	0.99	0.99	NA	NA	NA	NA	NA	NA	
3/25/2004	D	On	On	0.7	0.99	0.99	NA	NA	NA	NA	NA	NA	
4/29/2004	D	On	On	0.7	0.99	0.99	NA	NA	NA	NA	NA	NA	
5/1/2004	C	On	On	0.7	0.99	0.99	NA	NA	NA	NA	NA	NA	
8/25/2004	B,D	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
7/22/2004	D	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
8/25/2004	D	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
9/22/2004	E	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
10/20/2004	A	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
11/17/2004		On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
12/18/2004		On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
1/1/2005	F	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
2/2/2005	I,J	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
2/4/2005	H,I	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
2/11/2005	J	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
2/21/2005		On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
3/21/2005	K	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
4/17/2005	I	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
5/5/2005	J,M	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
5/19/2005	J,M,N	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
5/27/2005	J,M,N	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
6/17/2005	J,M,N	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
7/15/2005	J,M	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
8/11/2005	O,P	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
8/19/2005	Q	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
8/26/2005	R	On	On	0.7	0.98	0.98	NA	NA	NA	NA	NA	NA	
		Sampling time per cycle (min)											
		10	10	10	10	10	10	10	10	10	10	10	10

Reporting Period: Third Quarter 2005 (7/1/2005 to 9/30/2005)

Total Hours Operational: 5,407

Total Pounds Ozone Injected: 49,2

Period Hours Operational: 264

Period Percent Operational: 15%

Period Pounds Ozone Injected: 2,4

Definitions:

PH = Periods per square inch

— = Data not available

NA = Not Applicable

Notes:

Cycle runs 18 times a day for a total of 1,260 minutes per day, or 87.5% utilization.

System down due to tripped safety sensor.

b = Bar pressure gauge.

c = Main system check valve.

d = Alarms Pressure Gauge installed in sparge cabinet.

e = Bid GFI switch. Replaced and restored.

f = System down due to faulty wire.

g = Site visit to repair faulty wire.

h = System reprogrammed to run 10 min. cycles for each well with line delay ratio, replicated primary power winds.

i = System restarted.

j = Piping and cylinder replaced and system restarted.

k = System down due to tripped breaker. System restarted.

l = Plugged ES solenoid with threaded fitting. Check for leaks, none, left system on.

m = Site visit for repairs only. No reading taken.

n = Initiated new compressor, replaced 18 amp breaker with line delay ratio, replicated primary power winds.

o = PG&E turned off power to the business the system gets its power from.

**Table 2**  
**Ozone Injection System Groundwater Monitoring Data**  
 Former Circle K Store No. 01106  
 1693 Central Avenue, McKinleyville, California

### Definitions:

Notes:

MW-2 Sample contains discrete peak in gasoline range.

MV-2 | Py concentration reflects individual. G discrete unidentified peaks not matching a typical fuel pattern.

Data not available at time of reporting.

MW-4: MS/MSD spike recoveries were above acceptable limits at the start of GCxG

Monthly sampling discontinued at the request of Cop.

**ATTACHMENT 1  
TRC'S QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2005**

Third Quarter 2005 Quarterly Summary and  
Remediation Status Report  
Former 76 Station No. 1106  
1693 Central Avenue  
McKinleyville, California  
SECOR Project No.: 77CP.60009.01.1106

SEE TRC

3Q05 QMR

**ATTACHMENT 2  
REMEDIATION SYSTEM FIELD DATA SHEETS**

Third Quarter 2005 Quarterly Summary and  
Remediation Status Report

Former 76 Station No. 1106  
1693 Central Avenue  
McKinleyville, California  
SECOR Project No.: 77CP.60009.01.1106

Field Data Sheet  
Ozone Sparge System

**ConocoPhillips Site # 1106  
1693 Central Ave.  
McKinleyville, California**

Requested By: Kimber Collins  
Lab: STL

Field Data Sheet  
Ozone Sparge System

**ConocoPhillips Site # 1106  
1693 Central Ave.  
McKinleyville, California**

Requested By: Kimber Collins  
Lab: STL

System Maintenance	Frequency	Date Performed
Check Integrity of All Hoses, Fittings, Piping, Valves	Monthly	7/15/05
Measure Blower Running Amperage	Monthly	10.0 Amp
Inspect electrical fittings and tighten as needed	Monthly	
Gross particle filter-visually inspect	Monthly	
Gross particle filter-replace as necessary	As Needed	
Check controller operation	Monthly	
Adjust controller program	As-Needed	
Check flow and pressure on assemblies (system and wells)	Monthly	
Take ozone readings at compound and well boxes	Monthly	
Check wellhead connections	Monthly	
Check/test all safety override systems	Monthly	
Sparge blower-repair as necessary	As-Needed	
Sparge blower-replace as necessary	As-Needed	



## ENGINEERS &amp; GEOLOGISTS

812 W. Wabash Ave.  
Eureka, CA 95501-2138Tel. 707/441-8855  
Fax: 707/441-8877

JOB COP - McKinleyville - 003334

SHEET NO. 1 OF 1

CHIEFED BY C. Fisher

DATE 11<sup>th</sup> Aug '05

CHECKED BY \_\_\_\_\_

DATE \_\_\_\_\_

SCALE \_\_\_\_\_

- Removed Old Air Compressor
- Installed New Air Compressor
  - + Remounted
  - + Re-installed Air filter, Pressure relief valve, & Outlet hose
  - + Re-connected wires (Tinned wires)
- Installed Fuse to replace 16A Breaker (1519 Time Delay Fuse)
  - + Tinned all wires
  - + Mounted fuse holder
  - + Removed Replaced wires with 12 AWG wire (tinned wires)
- Replaced primary Power wires (tinned all wires) (Not a Neutral)
  - + From: Power 1M Terminal Block, to: GFCI outlet
  - + From: GFCI outlet, to: Primary Terminal Block
  - + From: Terminal Block (Primary), to: Secondary Power 15 block
  - + From: Secondary Terminal Block, to: Master Relay
  - + From: Master Relay, to: 8A Current Relay
  - + From: 8A Current Relay, to: Secondary Terminal Block
  - + From: Secondary Terminal Block, to: Primary Terminal Block
- Re-sealed all wires with Zip-Ties
- Tightened all accessible electrical connections (~ 1/2 required tightening)
- Restarted System - OK hour meter = 5,311.01 hours
- Checked for Ozone Leaks - No leaks (w/ Ozone Meter)
- Checked New Air Filter housing. Vibration have worn away the tabs that secure filter cover
- Pilot light of Ozone Sensor is failing

**Field Data Sheet**  
**Ozone Sparge System**

**CancoPhillips Site # 1106  
1693 Central Ave.  
McKinleyville, California**

Requested By: Kimber Collins  
Lab: STL

Well Data											
Initials	Date	1	2	3	4	5	6	7	O <sub>2</sub>	H <sub>2</sub> S	CO <sub>2</sub>
		Press	O <sub>2</sub>	Press	O <sub>3</sub>	Press	O <sub>3</sub>	Press	O <sub>3</sub>	Press	O <sub>3</sub>
AT	8/13/05	330	330	0	320	0	340	0	320	0	300
		35									
Measurement units:		psi	ppm	psi	ppm	psi	ppm	psi	ppm	psi	ppm
		psi	ppm	psi	ppm	psi	ppm	psi	ppm	psi	ppm

Initials	Date	Monthly Sampling				System Status on Departure (On/Off)	Ozone Badge Color (White/Tan/Brown)	Departure Time
		Temp in Ozone Panel	MW-2 ORP (mV)	MW-4 ORP (mV)	DO (mg/L)			
pet	8/12/05	5	3 m/s	77°		On	Blue	1125

Field Data Sheet  
Ozone Sparge System

**ConocoPhillips Site # 1106  
1693 Central Ave.  
McKinleyville, California**

Requested By: Kimber Collins  
Lab: STL

System Maintenance	Frequency	Date Performed
Check Integrity of All Hoses, Fittings, Piping, Valves	Monthly	8/18/05
<b>Measure Blower Running Amperage</b>	Monthly	10/1
Inspect electrical fittings and tighten as needed	Monthly	
Gross particle filter-visually inspect	Monthly	
Gross particle filter-replace as necessary	As-Needed	
Check controller operation	Monthly	
Adjust controller program	As-Needed	
Check flow and pressure on assemblies (system and wells)	Monthly	
Take ozone readings at compound and well boxes	Monthly	
Check wellhead connections	Monthly	
Check/test all safety override systems	Monthly	
Sparge blower-repair as necessary	As-Needed	
Sparge blower-replace as necessary	As-Needed	

Field Data Sheet  
Ozone Sparge System

ConocoPhillips Site # 1106  
1693 Central Ave.  
McKinleyville, California

Requested By: Kimber Collins  
Lab: STL

Copy

## Field Data Sheet Ozone Sparge System

ConocoPhillips Site # 1106  
1693 Central Ave.  
McKinleyville, California

Requested By: Kimber Collins  
Lab: STL

System Maintenance	Frequency	Date Performed
Check Integrity of All Hoses, Fittings, Piping, Valves	Monthly	
Measure Blower Running Amperage	Monthly	
Inspect electrical fittings and tighten as needed	Monthly	
Gross particle filter-visualy inspect	Monthly	
Gross particle filter-replace as necessary	As Needed	
Check controller operation	Monthly	
Adjust controller program	As Needed	
Check flow and pressure on assemblies (system and wells)	Monthly	
Take ozone readings at compound and well boxes	Monthly	
Check wellhead connections	Monthly	
Check/test all safety override systems	Monthly	
Sparge blower-repair as necessary	As Needed	
Sparge blower-replace as necessary	As Needed	

**ATTACHMENT 3  
CERTIFIED LABORATORY ANALYTICAL REPORTS AND  
CHAIN-OF-CUSTODY DOCUMENTAION**

Third Quarter 2005 Quarterly Summary and  
Remediation Status Report

Former 76 Station No. 1106  
1693 Central Avenue  
McKinleyville, California  
SECOR Project No.: 77CP.60009.01.1106

**SECOR-Sacramento**

**July 29, 2005**

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670

Attn.: Kimber Collins

Project#: 77CP.60004.01.1106

Project: Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

Attached is our report for your samples received on 07/19/2005 09:10

This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after  
09/02/2005 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,  
please call me at (925) 484-1919.

You can also contact me via email. My email address is: [asalimpour@stl-inc.com](mailto:asalimpour@stl-inc.com)

Sincerely,



Afsaneh Salimpour  
Project Manager

**Gas/BTEX/MTBE by 8260B**

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-2	07/15/2005 14:15	Water	1
MW-4	07/15/2005 13:55	Water	2

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106  
Conoco Philips Site #1106

Received: 07/19/2005 09:10

Site: 1693 Central Ave., McKinleyville, CA

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Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-2	Lab ID:	2005-07-0482 - 1
Sampled:	07/15/2005 14:15	Extracted:	7/22/2005 18:44 7/28/2005 01:02
Matrix:	Water	QC Batch#:	2005/07/22-1A.07 2005/07/27-2A.64

Analysis Flag: L2, pH: &lt;2 ( See Legend and Note Section )

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	1100	100	ug/L	2.00	07/28/2005 01:02	
Benzene	170	0.50	ug/L	1.00	07/22/2005 18:44	
Toluene	170	0.50	ug/L	1.00	07/22/2005 18:44	
Ethylbenzene	23	0.50	ug/L	1.00	07/22/2005 18:44	
Total xylenes	140	1.0	ug/L	1.00	07/22/2005 18:44	
Methyl tert-butyl ether (MTBE)	110	1.0	ug/L	2.00	07/28/2005 01:02	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	139.5	73-130	%	2.00	07/28/2005 01:02	S5
1,2-Dichloroethane-d4	88.3	73-130	%	1.00	07/22/2005 18:44	
Toluene-d8	84.8	81-114	%	2.00	07/28/2005 01:02	
Toluene-d8	96.0	81-114	%	1.00	07/22/2005 18:44	

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

Prep(s): 5030B

Test(s): 8260B

Sample ID: MW-4

Lab ID: 2005-07-0482 - 2

Sampled: 07/15/2005 13:55

Extracted: 7/24/2005 00:27

Matrix: Water

QC Batch#: 2005/07/23-2C.68

pH: &lt;2

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	1.00	07/24/2005 00:27	
Benzene	ND	0.50	ug/L	1.00	07/24/2005 00:27	
Toluene	ND	0.50	ug/L	1.00	07/24/2005 00:27	
Ethylbenzene	ND	0.50	ug/L	1.00	07/24/2005 00:27	
Total xylenes	ND	1.0	ug/L	1.00	07/24/2005 00:27	
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/24/2005 00:27	
<i>Surrogate(s)</i>						
1,2-Dichloroethane-d4	103.3	73-130	%	1.00	07/24/2005 00:27	
Toluene-d8	102.9	81-114	%	1.00	07/24/2005 00:27	

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

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3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

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Batch QC Report

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Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/07/22-1A.07

MB: 2005/07/22-1A.07-003

Date Extracted: 07/22/2005 14:31

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	0.5	ug/L	07/22/2005 14:31	
Toluene	ND	0.5	ug/L	07/22/2005 14:31	
Ethylbenzene	ND	0.5	ug/L	07/22/2005 14:31	
Total xylenes	ND	1.0	ug/L	07/22/2005 14:31	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	92.2	73-130	%	07/22/2005 14:31	
Toluene-d8	96.4	81-114	%	07/22/2005 14:31	

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

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Batch QC Report

---

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/07/23-2C.68

MB: 2005/07/23-2C.68-047

Date Extracted: 07/23/2005 18:47

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	07/23/2005 18:47	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/23/2005 18:47	
Benzene	ND	0.5	ug/L	07/23/2005 18:47	
Toluene	ND	0.5	ug/L	07/23/2005 18:47	
Ethylbenzene	ND	0.5	ug/L	07/23/2005 18:47	
Total xylenes	ND	1.0	ug/L	07/23/2005 18:47	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	105.9	73-130	%	07/23/2005 18:47	
Toluene-d8	100.1	81-114	%	07/23/2005 18:47	

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100  
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Project: 77CP.60004.01.1106  
Conoco Philips Site #1106

Received: 07/19/2005 09:10

Site: 1693 Central Ave., McKinleyville, CA

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2005/07/27-2A.64

MB: 2005/07/27-2A.64-041

Date Extracted: 07/27/2005 19:41

Compound	Conc.	RL	Unit	Analyzed	Flag
GRO (C6-C12)	ND	50	ug/L	07/27/2005 19:41	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/27/2005 19:41	
Benzene	ND	0.5	ug/L	07/27/2005 19:41	
Toluene	ND	0.5	ug/L	07/27/2005 19:41	
Ethylbenzene	ND	0.5	ug/L	07/27/2005 19:41	
Total xylenes	ND	1.0	ug/L	07/27/2005 19:41	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	109.8	73-130	%	07/27/2005 19:41	
Toluene-d8	86.0	81-114	%	07/27/2005 19:41	

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

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Batch QC Report

---

Prep(s): 5030B

Test(s): 8260B

## Laboratory Control Spike

## Water

## QC Batch # 2005/07/22-1A.07

LCS 2005/07/22-1A.07-002  
LCSD

Extracted: 07/22/2005

Analyzed: 07/22/2005 14:02

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	21.8		25	87.2			69-129	20		
Toluene	22.5		25	90.0			70-130	20		
<i>Surrogates(s)</i>										
1,2-Dichloroethane-d4	478		500	95.6			73-130			
Toluene-d8	489		500	97.8			81-114			

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

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Batch QC Report

---

Prep(s): 5030B

Test(s): 8260B

## Laboratory Control Spike

## Water

## QC Batch # 2005/07/23-2C.68

LCS 2005/07/23-2C.68-021

Extracted: 07/23/2005

Analyzed: 07/23/2005 18:21

LCSD 2005/07/23-2C.68-048

Extracted: 07/24/2005

Analyzed: 07/24/2005 03:53

Compound	Conc.		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	22.0	23.1	25	88.0	92.4	4.9	65-165	20		
Benzene	22.9	23.5	25	91.6	94.0	2.6	69-129	20		
Toluene	24.1	24.1	25	96.4	96.4	0.0	70-130	20		
<i>Surrogates(s)</i>										
1,2-Dichloroethane-d4	426	427	500	85.2	85.4		73-130			
Toluene-d8	521	520	500	104.2	104.0		81-114			

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106  
Conoco Phillips Site #1106

Received: 07/19/2005 09:10

Site: 1693 Central Ave., McKinleyville, CA

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

## Laboratory Control Spike

## Water

## QC Batch # 2005/07/27-2A.64

LCS 2005/07/27-2A.64-016  
LCSD 2005/07/27-2A.64-014

Extracted: 07/27/2005  
Extracted: 07/27/2005

Analyzed: 07/27/2005 19:16  
Analyzed: 07/27/2005 20:14

Compound	Conc.		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	28.8	23.6	25	115.2	94.4	19.8	65-165	20		
Benzene	26.8	24.9	25	107.2	99.6	7.4	69-129	20		
Toluene	26.1	25.4	25	104.4	101.6	2.7	70-130	20		
<i>Surrogates(s)</i>										
1,2-Dichloroethane-d4	530	511	500	106.0	102.2		73-130			
Toluene-d8	416	428	500	83.2	85.6		81-114			

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106  
Conoco Philips Site #1106

Received: 07/19/2005 09:10

Site: 1693 Central Ave., McKinleyville, CA

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

## Matrix Spike ( MS / MSD )

## Water

## QC Batch # 2005/07/22-1A.07

MS/MSD

Lab ID: 2005-07-0381 - 003

MS: 2005/07/22-1A.07-007

Extracted: 07/22/2005

Analyzed: 07/22/2005 17:45

MSD: 2005/07/22-1A.07-008

Extracted: 07/22/2005

Analyzed: 07/22/2005 18:15

Dilution: 1.00

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Benzene	41.8	33.8	13	25	115.2	83.2	32.3	69-129	20		R1
Toluene	32.4	24.1	ND	25	129.6	96.4	29.4	70-130	20		R1
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	467	450		500	93.4	90.0		73-130			
Toluene-d8	598	441		500	119.6	88.2		81-114		S7	

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100  
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Project: 77CP.60004.01.1106  
Conoco Philips Site #1106

Received: 07/19/2005 09:10

Site: 1693 Central Ave., McKinleyville, CA

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

## Matrix Spike ( MS / MSD )

## Water

## QC Batch # 2005/07/23-2C.68

MS/MSD

Lab ID: 2005-07-0388 - 001

MS: 2005/07/23-2C.68-042

Extracted: 07/23/2005

Analyzed: 07/23/2005 19:42

MSD: 2005/07/23-2C.68-008

Extracted: 07/23/2005

Dilution: 20.00

Analyzed: 07/23/2005 20:08

Dilution: 20.00

Compound	Conc. ug/L			Spk.Level	Recovery %			Limits %		Flags	
	MS	MSD	Sample		ug/L	MS	MSD	RPD	Rec.	RPD	MS
Methyl tert-butyl ether	2180	2110	1570	500	122.0	108.0	12.2	65-165	20		
Benzene	504	541	0.572	500	100.7	108.1	7.1	69-129	20		
Toluene	515	553	1.81	500	102.6	110.2	7.1	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	431	412		500	86.2	82.4		73-130			
Toluene-d8	503	534		500	100.6	106.8		81-114			

## Gas/BTEX/MTBE by 8260B

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100  
Rancho Cordova, CA 95670  
Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106  
Conoco Philips Site #1106

Received: 07/19/2005 09:10

Site: 1693 Central Ave., McKinleyville, CA

## Batch QC Report

Prep(s): 5030B

Test(s): 8260B

## Matrix Spike ( MS / MSD )

## Water

## QC Batch # 2005/07/27-2A.64

MS/MSD

Lab ID: 2005-07-0594 - 004

MS: 2005/07/27-2A.64-042

Extracted: 07/27/2005

Analyzed: 07/27/2005 21:28

MSD: 2005/07/27-2A.64-043

Extracted: 07/27/2005

Dilution: 1.00

Analyzed: 07/27/2005 21:40

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limils %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	28.6	30.9	ND	25	114.4	123.6	7.7	65-165	20		
Benzene	26.7	28.9	ND	25	106.8	115.6	7.9	69-129	20		
Toluene	27.0	31.1	ND	25	108.0	124.4	14.1	70-130	20		
<i>Surrogate(s)</i>											
1,2-Dichloroethane-d4	573	601		500	114.6	120.2		73-130			
Toluene-d8	417	477		500	83.4	95.4		81-114			

**Gas/BTEX/MTBE by 8260B**

SECOR-Sacramento

Attn.: Kimber Collins

3017 Kilgore Road, Suite 100

Rancho Cordova, CA 95670

Phone: (916) 861-0400 Fax: (916) 861-0430

Project: 77CP.60004.01.1106

Received: 07/19/2005 09:10

Conoco Philips Site #1106

Site: 1693 Central Ave., McKinleyville, CA

---

**Legend and Notes**

---

**Analysis Flag**

L2

Reporting limits were raised due to high level of analyte present in the sample.

**Result Flag**

R1

Analyte RPD was out of QC limits.

S5

Surrogate recoveries higher than acceptance limits.  
Matrix interference suspected

S7

Surrogate recoveries higher than acceptance limits.

# ConocoPhillips Chain Of Custody Record

116574

STL-San Francisco

1220 Quarry Lane

Placerville, CA 95666

(925) 484-1919 (925) 484-1096 fax

2005-07-04

ConocoPhillips Site Manager:

INVOICE REMITTANCE ADDRESS:

CONOCOPHILLIPS  
Attn: Dan Hutchinson

T-11 S 1<sup>st</sup> Hutchison, Suite 200

AIA 704

ConocoPhillips Work Order Number:  
**1103SEC700**

DATE: 21/5/05

PAGE: 1 of 1

Gathering Company:  
**SECOR International Inc**

Name/Value ID:  
**1105**

Project Contact Name/Email Address:  
**Kimber Collins, Casey Sanders**

Telephone:  
**(916) 861-0400**

Fax:  
**(916) 861-0430**

E-mail:  
**Kcollins@secor.com, casydes@secor.com**

Sample Name/ID/Phone:  
**77CP-6004-01,1106**

Turnaround Time/Calendar Days:  
 1-5 days  7 days  7+ hours  24 hours  less than 24 hours

SPECIAL INSTRUCTIONS OR NOTES:  
 CHECK BOX IF FODS IS NEEDED [ ]

Please send EDF, PDF deliverable to [kcollins@secor.com](mailto:kcollins@secor.com), [bsims@secor.com](mailto:bsims@secor.com),  
and [casydes@secor.com](mailto:casydes@secor.com)

\* Field Point name only required if different from Sample ID  
Name:  
**Sample Identification/Field Point Name:**

Line #  
SAMPLING DATE TIME MATRIX No. OF DOTS  
KEY

**LW-2**  
**1/26/05 11:15**  
**Water**  
**J**  
**X**

**MW-1**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-2**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-3**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-4**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-5**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-6**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-7**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-8**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-9**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-10**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-11**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-12**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

**MW-13**  
**1/30/05 11:15**  
**Water**  
**J**  
**X**

1623 Central Ave., McKinleyville, CA  
[FOR DELIVERABLE TO MR. D. HUTCHINSON]  
Kimber Collins, Grace Sims and Casey Sanders  
PHONE NO.: (916) 861-0400  
FAX: (916) 861-0430  
E-MAIL: [kcollins@secor.com](mailto:kcollins@secor.com)  
ED RAJSTON  
GLOBAL ID#: T060530379  
ConocoPhillips SITE MANAGER

## REQUESTED ANALYSES

FIELD NOTES:  
Compliance/Preservative  
or PDI Readings  
or Laboratory Notes

TEMPERATURE ON RECEIPT: 13

TIME: 7-19-05  
Date: 09/10  
Time: 10:00 AM

RECEIVED BY: Kimber Collins

RECEIVED BY: Casey Sanders

RECEIVED BY: Dan Hutchinson

RECEIVED BY: Grace Sims

RECEIVED BY: Ed Rajston

RECEIVED BY: Global ID#

RECEIVED BY: T060530379

RECEIVED BY: ConocoPhillips SITE MANAGER

RECEIVED BY: Ed Rajston

RECEIVED BY: Kimber Collins

RECEIVED BY: Casey Sanders

RECEIVED BY: Dan Hutchinson

RECEIVED BY: Grace Sims

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